SPECIAL CONDITIONS

Permit Number 19348

Emission Limitations

1. This permit covers only those sources of emissions listed in the attached table, entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table. In addition, this permit authorizes all emissions from planned startup and shutdown activities associated with facilities or groups of facilities that are authorized by this permit.

Fuel Specification

2. Fuel for the Catalytic Oxidizers 1 and 2 (Emission Point Nos. [EPNs] 2 and 3) shall be pipeline-quality sweet natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).

3. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

Federal Applicability

4. These facilities shall comply with the requirements of Title 30 Texas Administrative Code § 113.200 (30 TAC § 113.200), including the referenced requirements contained in Title 40 Code of Federal Regulations Part 63, Subpart O (40 CFR Part 63, Subpart O), Maximum Achievable Control Technology Standard - Ethylene Oxide (EtO) Emission Standards for Sterilization Facilities.

Opacity/Visible Emission Limitations

5. There shall be no visible emissions from Glygen and Packed Tower Scrubbers, and two aeration cell catalytic oxidizers, when adjusted for uncombined water vapor, averaged over a six-minute period, except for those periods provided in 30 TAC §§ 101.201 and 101.211.

Operational Limitations, Work Practices, and Plant Design

6. As represented in the permit application, the following shall occur to maintain compliance with all TCEQ rules and regulations:

   A. All hoods, duct, and collection systems shall be effective in capturing emissions from this equipment and in preventing fugitive emissions from the building. The hooding and duct system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emission capture system.

B. In order to minimize emissions from the plant, sterilizers 1-4 shall vent to the Glygen Scrubbers 1 and 2 (EPN 1) with a minimum efficiency of 99 percent, the primary and secondary aeration rooms shall vent to Catalytic Oxidizers 1 and 2 (EPNs 2 & 3 respectively), which shall operate with a minimum efficiency of no less than 99 percent. Sterilizers 5-10 shall vent to Packed Tower #1 (EPN 5) and the aeration cells (up to twelve) shall vent to Packed Tower #2 (EPN 4) with a minimum efficiency of no less than 99 percent. If the control device malfunctions, sterilization operations shall be stopped until the control device is working properly again.

C. For sterilization facilities complying with 40 CFR 63.363 (b) through the use of an acid water scrubber, the owner or operator shall measure and record once per week, the level of the scrubber liquor in EPN 1, and Tank 3 for EPN 4 and EPN 5. (Tanks 1 and 2 are overflow tanks.) The owner or operator shall install, maintain, and use a liquid level indicator to measure the scrubber liquor tank level (i.e., a marker on the tank wall, a dipstick, a magnetic indicator, etc.).

D. Under no circumstances will the sterilizers or aeration chamber vents be allowed to vent directly to the atmosphere when EtO is present.

E. All EtO supply drums (all new drums in use or empty) shall be grounded to the earth to suppress potential sparks.

F. Process gases shall be stored in a way that prevents damage to the storage container and release of uncontrolled emissions.

G. All sterilizer technicians and other personnel involved in any aspect of EtO sterilization shall be trained in safe handling and the use of EtO. There shall be trained personnel in the facility any time the plant is in operation or whenever maintenance is performed.

H. Oxidizers shall operate continuously unless no waste stream is generated.

7. The holder of this permit shall operate and maintain an automatically controlled catalytic oxidation system capable of controlling fugitive EtO emissions from the aeration cells, aeration rooms, and sterilization room for Building 1.

In order to maintain the maximum combustion efficiency for EtO, the catalytic oxidizers shall meet the following specifications:

A. Maintain operating temperature within the range of 240°F to 500°F.

B. Catalytic Oxidizer 1: Handling maximum of 9,000 cubic feet per minute of EtO waste stream(s).

Catalytic Oxidizer 2: Handling maximum of 4,500 cubic feet per minute of EtO waste stream(s).

C. The monthly average natural gas usage rate for the Catalytic Oxidizers shall not exceed 30,000,000 cubic feet.

8. EtO usage rate is limited to a maximum daily usage of 1,620 pounds of EtO from a sterilant gas consisting of 100 percent EtO and a maximum annual usage of 583,000 pounds of EtO for sterilizer units 1-4. EtO usage rate is limited to a maximum daily usage of 3,840 pounds of EtO from a sterilant gas consisting of 100 percent EtO and a maximum annual usage of 1,401,600 pounds of EtO for sterilizer units 5-10.

Initial Determination of Compliance

9. The holder of this permit is responsible for providing initial performance testing as required to establish the actual pattern and quantity of ethylene oxide being emitted into the atmosphere from the scrubber stacks in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the test methods listed in 40 CFR 63, Subpart A, § 63.7 and Subpart O. Within 180 days of startup of each new sterilizer, the sterilizer will be tested in conjunction with all sterilizers currently in operation. The holder of this permit is responsible for providing sampling and testing operations at his expense.

Demonstration of Continuous Compliance

10. Upon being informed by the TCEQ Executive Director that the staff has documented visible emissions from these facilities exceeding 5 percent opacity, when adjusted for uncombined water vapor, averaged over six-consecutive minutes, the holder of this permit may be required to conduct stack sampling analyses or other tests to prove satisfactory equipment performance and demonstrate compliance with Special Condition No. 1. Sampling must be conducted in accordance with appropriate procedures of the TCEQ Sampling Procedures Manual or in accordance with applicable EPA Code of Federal Regulations procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

11. For sterilization facilities using an acid water scrubber, the owner or operator shall measure and record once per week, the level of the scrubber liquor in EPN 1, and Tank 3 for EPN 4, and EPN 5. (Tanks 1 and 2 are overflow tanks.) The owner or operator shall install, maintain, and use a liquid level indicator to measure the scrubber liquor tank level (i.e., a marker on the tank wall, a dipstick, a magnetic indicator, etc.). Continuous determination of compliance shall be conducted in accordance with the applicable portions of 40 CFR, Subpart O, §63.363.

Sampling Requirements

12. The sampling shall occur to demonstrate compliance with the MAERT and with 99.0 percent minimum removal efficiency for EtO in accordance with the test methods listed in 40 CFR 63 Subpart O.

13. Sampling ports and platforms shall be installed on the exhaust stacks according to the specifications set forth in the attachment, entitled "Chapter 2, Stack Sampling Facilities,"

prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the Executive Director of the TCEQ.

14. A pretest meeting concerning the required sampling shall be held with personnel from the TCEQ before the required tests are performed. Air contaminants to be tested for and the test methods to be used shall be determined at this pretest meeting.

    A. Sampling shall occur within 60 days of Special Condition No. 10 stipulations.

    B. Other sampling shall occur not later than 180 days after start-up for the new source at this facility and at such other times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the regional office.

    C. The TCEQ Regional Office shall be notified not less than 45 days prior to sampling to schedule a pretest meeting.

       The notice to the TCEQ Regional Office shall include:

       (1) Date for pretest meeting.

       (2) Date sampling shall occur.

       (3) Name of firm conducting sampling.

       (4) Type of sampling equipment to be used.

       (5) Method or procedure to be used in sampling.

       The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test results.

    D. A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Office shall approve or disapprove of any deviation from specified sampling procedures.

    E. Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions of the affected source). Performance testing shall be conducted in accordance with the applicable portions of 40 CFR, Subpart O, § 63.365.

    F. The sampling report shall include the following:

       (1) EtO usage rate during tests.

       (2) Type of fuel and consumption rates.

       (3) Volume of representative product used in testing.

    G. Copies of the final sampling report shall be submitted within 45 days after sampling is completed. Sampling reports shall comply with the provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TCEQ Regional Office.

One copy to each appropriate local air pollution control program.

Recordkeeping Requirements

15. To determine continual compliance with emission limitations specified in the special conditions and the representations made in the permit application, the holder of this permit shall keep and maintain the following records for a rolling 24 month period:

    A. Continuous operating temperature for the catalytic oxidizers;

    B. The total pounds of EtO used per cycle and the number of cycles operated per month;

    C. Monthly and annual natural gas usage rates for the operation of the catalytic oxidizers;

    D. Inspection and maintenance activities on the abatement equipment, and piping systems;

    E. The weekly level of the scrubber liquor in the reaction tanks (T-3) shall be measured; and recorded.

    F. The weekly liquor level of the Glygen Units shall be measured and recorded.

    These records shall be made available upon request by personnel of TCEQ or the local air pollution control agency having jurisdiction.

Dated: October 10, 2014

Emission Sources - Maximum Allowable Emission Rates

Permit Number 19348

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (5)	
			lbs/hour	TPY (4)
EPN 1	4 Glygen Scrubbers (Common) Stack (Sterilizers 1 - 4)	EtO	1.62	2.80
EPN 2	Primary Aeration Catalytic Oxidizer 1 Stack	VOC	0.10	0.45
		NO_X	0.66	2.88
		SO_2	0.01	0.05
		PM	0.14	0.63
		PM_{10}	0.14	0.63
		CO	1.56	6.81
		EtO	0.03	0.20
EPN 3	Secondary Aeration Catalytic Oxidizer 2 Stack	VOC	0.04	0.17
		NO_X	0.72	2.80
		SO_2	<0.01	0.02
		PM	0.05	0.24
		PM_{10}	0.05	0.24
		CO	0.61	2.66
		EtO	0.03	0.02
EPN 4	Process Packed Tower 1 Scrubber Stack (12 Glygen Scrubbers For Sterilizers 5 -10)	EtO	0.29	0.19
EPN 5	Aeration Packed Tower 2 Scrubber	EtO	0.53	0.72

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (5)	
			lbs/hour	TPY (4)
	Stack			

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
CO - carbon monoxide
EtO - ethylene oxide
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Planned startup and shutdown emissions are included. Maintenance activities are not authorized by this permit.

Date: February 3, 2015